



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/522,910

09/13/2005

Tony Amato

745691-37

6657

22204

7590

02/24/2009

NIXON PEABODY, LLP

401 9TH STREET, NW

SUITE 900

WASHINGTON, DC 20004-2128

EXAMINER

ALLEN, CAMERON J

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

02/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/522,910	Applicant(s) AMATO, TONY	
	Examiner CAMERON J. ALLEN	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/02/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The Examiner interprets the claims to invoke 35 USC 112 sixth paragraph.

A claim limitation will be presumed to invoke 35 U.S.C. 112, sixth paragraph, if it meets the following 3-prong analysis:

- (A) the claim limitations must use the phrase “means for ” or “step for; ”
- (B) the “means for ” or “step for ” must be modified by functional language;
and
- (C) the phrase “means for ” or “step for ” must not be modified by sufficient structure, material, or acts for achieving the specified function. See MPEP 2181

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 36-68 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims invoke the means + function 112 sixth paragraph limitation. The specification does not clearly and distinctly point out the structure limitations.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 36-68 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The specification does not clearly and distinctly point out the means for applying ultrasonic energy.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 36, 37, 40, 46, 47, 66 and 68 are rejected under 35 U.S.C. 102(b) as being anticipated by Boucher US 3,672,823.

Regarding claim 36, Boucher discloses a fluid processing apparatus for use in an elongate passage, the apparatus comprising a plurality of means for applying ultrasonic energy to fluid within the passage provided at different axial positions along the elongate passage, wherein axially adjacent means for applying ultrasonic energy are radially non-parallel and radially non-opposing. (Column 8 lines 66-73)

Regarding claim 37, Boucher discloses an apparatus according to claim 36, wherein axially adjacent means for applying ultrasonic energy are relatively radially displaced by an angle between is between 0° and 90° (Column 8 line 68) *The examiner interprets a right angle to be 90 degree.*

Regarding claim 40, Boucher discloses an apparatus according to claim 36, which Comprises five or more means for applying ultrasonic energy contained within the same elongate passage. (Column 9 line 65)

Regarding claim 46, Boucher discloses an apparatus according to claim 36, wherein each means for applying ultrasonic energy preferably comprises an operating member connected to a vibration member, the operating member being connected to a source of ultrasonic energy. (Column 8 lines 66-73) The Examiner interprets the transducer to be the operating member and the plate to be the vibrating member.

Regarding claim 47, Boucher discloses an apparatus according to claim 46, wherein the means for applying ultrasonic energy has an inner passage through which fluid flowing through the apparatus passes. (Chamber 30)

Regarding claim 66, Boucher discloses a method of treating fluids comprising placing a fluid processing apparatus into an elongate passage, and passing the fluid through the elongate passage;

wherein said fluid processing apparatus includes a plurality of means for applying ultrasonic energy to fluid within the passage provided at different axial positions along the elongate passage, axially adjacent means for applying ultrasonic energy being radially non-parallel and radially non-opposing. (Column 8 lines 66-73)

Regarding claim 68, Boucher discloses a method according to claim 66 herein the elongate passage is aligned substantially vertically. (Figure 1 #30)

Art Unit: 1797

The inventions are distinct, each from the other because of the following reasons:

Claims 36, 41, 55-58, and 64 rejected under 35 U.S.C. 102(b) as being anticipated by Kelly WO 00/58224.

Regarding claim 36, Kelly discloses a fluid processing apparatus for use in an elongate passage, the apparatus comprising a plurality of means for applying ultrasonic energy (Figure 7 #16) to fluid within the passage provided at different axial positions along the elongate passage, wherein axially adjacent means for applying ultrasonic energy are radially non-parallel and radially non-opposing. (Page 8 lines 1-5) (Figure 6 #15 and page 18 line 9-14)

Regarding claim 41, Kelly discloses an apparatus according to claim 36, wherein alternate means for applying ultrasonic energy are radially aligned. (Page 9 line 19-32)(Figure 1 and 2 resonating plate 6 and transducer 8 and Figure 7)

Regarding claim 55, Kelly discloses an apparatus according to claim 36, wherein each means for applying ultrasonic energy comprises a vibration member having an inner passage. (Page 9 lines 19- 25)(Tube for ultrasound emission 2)

Regarding claim 56, Kelly discloses an apparatus according to claim 36, wherein the means for applying ultrasonic energy comprises an extender element (figure 1 #8) for projecting an operating member into said elongate passage, said apparatus further comprising flushing means capable of flushing detritus from said extender element. (Supply nozzle 5 for flushing means)

Art Unit: 1797

Regarding claims 57 and 64, Kelly discloses a fluid processing apparatus for use in an elongate passage, the apparatus comprising a means for applying ultrasonic energy to fluid within the passage, said means for applying ultrasonic energy comprising an extender element (figure 1 #8) for projecting an operating member into said elongate passage, said apparatus further comprising flushing means for directing cleaning media for flushing detritus from said extender element. (Supply nozzle 5 for flushing means)

Regarding claim 58, Kelly discloses an apparatus according to claim 57, wherein said flushing means comprises one or more nozzles provided at or adjacent said extender element. (Supply nozzle 5 for flushing means)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 38, 39, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boucher as applied above in claim 36 and 37.

Regarding claims 38 and 39, Boucher discloses an apparatus according to claim 37, but does not disclose wherein the angle is from 30° to 60° or is substantially 45° . It would have been obvious to one of ordinary skill in the art at the time of the invention was made to discover or use the above angles, since it has been held that where the general condition exists in the prior art, it is within the ordinary skill of one in the art to discover the optimum or workable ranges.

Regarding claim 44, Boucher discloses an apparatus according to claim 36, but does not disclose wherein axially adjacent means for applying ultrasonic energy are axially spaced by an amount from 30 to 40mm. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the ultrasonic means spaced apart 30 to 40 nm, since it has been held that mere relocation of parts is within the ordinary skill of one in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAMERON J. ALLEN whose telephone number is (571)270-3164. The examiner can normally be reached on M-Th 9-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CJA

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797